Two Additions to the Opisthobranch Fauna of the Southern Gulf of California

BY

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(1 Plate; 3 Text figures)

During the summer of 1969 I used the facilities of the Las Cruces Biological Station to study the opisthobranch fauna in the La Paz area of Baja California del Sur, Mexico. From this research in the southwestern Gulf of California, one new species has already been named (Bertsch, 1970b). In the paper, I describe a new species of Cephalaspidean and discuss the occurrence of a member of the nudibranch genus *Limenandra* in the Panamic province.

CEPHALASPIDEA

Aglajidae

Aglaja regiscorona Bertsch, spec. nov.

(Figures 1, 2 to 5)

Type Material: Holotype: mounted shell, California Academy of Sciences, Invertebrate Zoology Type Collection, no 556. Paratypes: Three specimens, CASIZ Type Collection, nos. 553, 554, 555. Three specimens, Los Angeles County Museum of Natural History, no. 1617. Two color transparencies of the living animal have also been deposited with the holotype material, CASIZ color slide series, nos. 2723 and 2724.

Type Locality: Bahía Las Cruces, Baja California del Sur, Mexico (24°13'N; 110°05'W); the type specimens were found crawling on the alga *Spyridia filamentosa*, intertidally, July 19 to 22, 1969; collector, Hans Bertsch.

Description: Length in life: 3 to 5 mm; width 1.25 to 1.75 mm; body color cream white, dorsum center darker dirty white (verging on light greenish-brown); edges of posterior lobes transparent white; cephalic hood frontal margin, and edges and sides of parapodia with numerous small black flecks; posterior lobes with some black spots; dorsum and cephalic shield covered with numerous papillae, some tipped with black (see Figure 1).

Head shield triangular, projecting posteriorly and upwards to a small, three-pointed crown. Parapodia small, held tight against sides of body, not extending over the

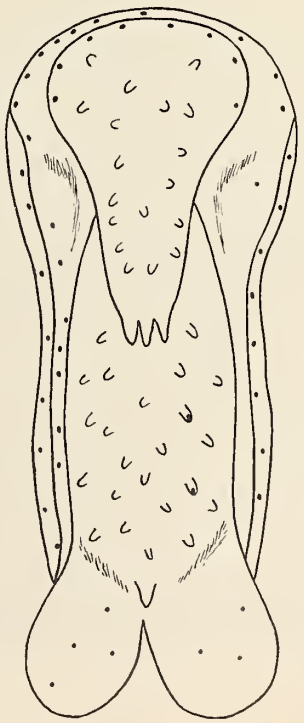

Figure 1

Dorsal view of *Aglaja regiscorona* Bertsch, spec. nov. Drawing of living animal by author

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dorsal surface. Two lobes project from rear, neither with a flagellum.

Shell (Figure 2) calcified, 0.55 mm long; nuclear whorl 0.18 mm wide. Nucleus of shell with one complete whorl; small flange projects laterally at right angle to plane of whorl (Figures 3 and 4). Small ridges, separated by a slight notch, circles the lateral edge of the whorl (Figure 4). Wing bends sharply vertically to plane of nuclear whorl, and folds again nearly parallel to the plane of the whorl. Distal end rectangular (Figure 5).

Discussion: Numerous factors distinguish *Aglaja* ***regiscorona*** from the other American species of *Aglaja*. The specific name (from the Latin: King's crown) was chosen in reference to its highly distinctive cephalic shield which resembles a royal crown. None of the other *Aglaja* species in the eastern Pacific, nor in the western Atlantic, have this unique configuration to their head shields. The coloration of *Aglaja* ***regiscorona*** resembles that of *A. nana* Steinberg and Jones, 1960. However, *A. nana* lacks the dorsal papillae, the three-point cephalic shield, and has less prominent posterior lobes. The body colors of *A. purpurea* (Bergh, 1893), *A. diomedea* (Bergh, 1893), *A. adellae* (Dall, 1894), *A. pusa* Marcus and Marcus, 1967, *A. felis* Marcus and Marcus, 1970, and *A. hummelincki* Marcus and Marcus, 1970, are all dark, in contrast to the light coloration of *A.* ***regiscorona***.

The left posterior lobe of *Aglaja ocelligera* (Bergh, 1893) has a flagellum, while *A.* ***regiscorona*** does not. *Aglaja gemmata* (Mörch, 1863) and *A. punctilucens* (Bergh, 1893) can be distinguished from *A.* ***regiscorona*** by their longitudinal dark striping.

The shell of *Aglaja* ***regiscorona*** has a distinct whorl, curved apical border (rather than a flattened edge), and a broad, flat, not in-curled wing. This serves to distinguish it from the other species in the genus.

NUDIBRANCHIA

Aeolidiidae

Limenandra nodosa Haefelfinger and Stamm, 1958

(Figures 6, 7)

Occurrence, Morphology and Zoogeographical Comments: The original description of *Limenandra nodosa* Haefelfinger and Stamm, 1958, was based on approximately 50 specimens from the French Riviera. Haefelfinger & Stamm (1958) established a new genus (*Limenandra*) for the species, and included a second species: *Baeolidia fusiformis* Baba, 1949. Until recently, *L. nodosa* had been known only from the Mediterranean and *L.*

Table 1

Comparison of morphology of *Limenandra fusiformis* from Japan (column I), *L. nodosa* from the Mediterranean (column II), and *L. nodosa* from the Gulf of California (column III)

	I *Limenandra fusiformis*	II *Limenandra nodosa*	III *Limenandra nodosa* (Gulf)
Radula	11 × 0·1·0 60 denticles	8 - 10 × 0·1·0 30 - 50 denticles	9 × 0·1·0 30 denticles
Cerata	rounded 12 - 15 rows 10 - 11 cerata in largest rows smooth	flattened 12 - 14 rows 1 - 9 cerata per row papillated	flattened 12 rows 1 - 8 cerata per row central cerata papillated on rows 4, 6, 8, 10, 11
Color	ashy brown yellowish spots	dull olive green white-yellow-red-white circlets small white spots over entire body	pale green yellow and pink circlets green-brown speckled over entire body
Jaws	smooth masticatory edge	long masticatory border very finely striated, but without denticulation	long, smooth masticatory border
Length	10 - 20 mm	15 - 25 mm	12 mm
Rhinophores	studded on posterior margin with papilliform granules	papillae over entire surface	papillae start about ½ way up length of rhinophores; very few on front, concentrated on posterior portion

Figure 2

Figure 3

Figure 4

Figure 5